

ABSTRACT OF THE DISCLOSURE

An arrangement for directing exhaust gases from at least one particle separator of a circulating fluidized bed reactor system to a heat recovery section includes a gas plenum located above a reaction chamber, the gas plenum being defined by a ceiling, a bottom, and walls and being integrated with the reaction chamber. The walls of the gas plenum are provided with at least one inlet opening for cleaned exhaust gases, each of which is coupled with a discharge duct connected to one of the particle separators, for directing the cleaned exhaust gases from the particle separators to the gas plenum, from where the cleaned exhaust gases are directed to the heat recovery section downstream of the gas plenum. The reaction chamber is at least partially formed by water tube panels, and the enclosure of the gas plenum is also formed by water tube panels as extensions of water tube panels of the reaction chamber.